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A TWELVEMONTH IN CALCUTTA.

ARRIVAL—DESCRIPTION OF A DWELLING-HOUSE—BREAKFAST—TIPPIN—SERVANTS.

Chowringhee Road, Calcutta, December 17, 184—"Tis like a dream that I am really here, thousands of miles away from home, every object strange around me—scenes, climate, habits, all equally unlike everything to which I have been accustomed. My head is still confused from the effects of the sea, bewildered by the bustle of the landing, and almost disturbed by my arrival, so that I have difficulty even now, after one whole day and two quiet nights, in collecting my thoughts sufficiently to continue my journal. I finished the story of our voyage at the Sandheads, and begin again according to promise.

Late in the evening of the 15th we ended our long and prosperous voyage. We were towed up the river by a steamer, and anchored opposite to one of the ghauts, or landing-places, where a crowd of boats, servants, and carriages, appeared to be waiting to receive us. It was nearly dark. Indeed the light which enabled us to distinguish the half-naked figures grouped about the broad flight of steps before us, was produced by the many torches carried here and there by this mob of dusky forms, all of whose movements were accompanied by loud discordant cries. The splash of oars was next heard at intervals. There was noise on board too: people jostling one another, strangers arriving, voices inquiring, friends greeting, and shuffling feet resounding on all sides. In the midst of this bedlam a soft voice spoke gently in pretty broken English at my elbow: we were on the deck near the cuddy door, looking with bewildered interest on so strange a scene; and bending down to find out who addressed us, I saw by the light of the lamp on the table a small dark-coloured man dressed all in white, with a red turban upon his head, a lantern in his hand, and no shoes upon his feet; who, bowing low before us, presented a note to Arthur. All that followed was confusion. We were in our cabin again among bags, and boxes, and bundles; we were back upon the deck; we descended the shipside; we were in a covered boat; we went up steps; more turbaned figures bowed before us—a carriage then advancing, we entered it, and drove away through long roads, past large houses and many gardens, all indistinct and perplexing. At length the carriage stopped before high gates; a gong-like bell sounded, the gates opened, and the next thing I recollect was raising myself out of Caroline's arms; from all which incoherent account you will understand in plain English that Edward had been watching for our vessel from the top of the Semaphore Tower, and that whenever he caught sight of the smoke of the steamer, he had hurried home, and sent his servants with carriage and boat to meet us.

I cannot attempt describing that first evening—it was almost incomprehensible. The size of the rooms, the blaze of light, the style of the dinner, the train of servants turbaned and robed, tapping their foreheads, and bowing nearly to the ground as we passed on to the table, filled me with amazement, beside the old familiar voices, last heard in scenes so different. Strange that I should have slept sound after such excitement! I had been very wakeful the last few nights at sea, and probably nature was pretty nearly worn out. We are splendidly lodged; but you will like to have a full description of Caroline's house. You must recollect that this pair of your children are great people—Edward is a *burra sahib*, and Caroline is a *burra bibi*, and so they have a handsome house and all appointments suitable. It stands in what is here called a compound—a piece of enclosed ground laid out in garden fashion; and it consists of three storeys, the plan of each being pretty much the same—one long room extending from front to back right through the house, with three smaller rooms on either side of it. At the end opposite the entrance, running along the whole width of the building, is a deep veranda, rising storey after storey with the house. There is a large projecting porch and a handsome staircase, of such a size as to carry a great body of air up to the higher floors. On the ground-floor, the long room is the dining-room, opening into the veranda, which is filled with flowers, and has steps down to the garden. The six smaller rooms on this storey go by the name of *go-downs*; we should call them store-rooms or servants' rooms. One is for the *obdar*, the person whose business it is to cool all the liquids; another is for the clerk, who keeps the books, checks the accounts, and also writes for Edward; the third is for the *ayah*, my sister's maid; the cellar, pantry, and lumber require the rest. The first floor is much loftier than the basement—very lofty to my eye. The long room makes a beautiful drawing-room, the veranda a charming addition to it. The suite of rooms on one side belongs to Caroline, that on the other to Edward; but as each of the six rooms has folding-doors into the long room, besides communicating in the same way through one another, and as the two end rooms—his study and her boudoir—open on the veranda, the whole apartments can be thrown into one when necessary. The dressing-rooms at the near end, which are also entered from the staircase, have each a bath-room taken off them, and space for a small spiral stair, that they may be reached from the outside, so that the low-caste servants, who have to attend in this department, never cross the floor of the house. The upper storey is a counterpart of the drawing-room floor. Arthur and I have it all to ourselves; and as the long middle room is unfinished, we mean to put all our tin cases, &c. into it as soon as we get our goods from the ship and the custom-

house. The veranda is really a luxurious lounge in the early morning. In the evening, people prefer the house-top, which is flat, and is reached by the little spiral stairs belonging to the bath-rooms, carried on for the purpose. This is quite a different arrangement from any we are used to in England, but it is admirably suited to the climate, Cary tells me, as is the style of furniture; though, if you happen to be sitting over the fire in your snug library on a snowy day, when you read my Indian descriptions, you will begin to shiver at the thoughts of the comforts by which we are surrounded.

In the dining-room there is very little to be seen: a table, two side-tables, a sideboard, chairs, footstools, a mat over the floor, and on the plain white walls a row of wall-shades—that is, sconces for lights, which, on account of the numerous insects, and the draught of air from the punkah, are enclosed in tall glass shades. At this season the punkah is not used, we having luckily arrived in the middle of the cold weather. It is merely a long frame of wood, covered with calico, in shape like a door or shutter. It is suspended lengthways from the ceiling by cords, and is pulled by a string held in the hand of a half-naked servant, squatted in some corner out of the way. Punkah is the Indian name for fan; and before some bright-witted European invented these fans on a large scale, people had to be fanned by their attendants, as the natives are still: few of whom have as yet admitted the punkah. The air in the rooms during the hot season becomes insupportable, unless it be kept continually in motion. The drawing-room makes a much more agreeable impression than the very bare dining-room. The height of this storey is very striking—twenty-four feet. Many rooms, I understand, reach to thirty feet, and few are less than twenty: we can imagine the propriety of this in such a climate. The walls are coloured a pale drab, and a surbase of cheenam-painted waincoat runs all along round the room—the floor of which, by the way, is composed of the same material, cheenam, a kind of fine lime. None of the roofs are ceiled. The rafters supporting the floor above are necessarily left exposed, in order that the depredations of the white ants may not escape detection; but in the drawing-room these beams are so ornamented, that the effect, combined with the lofty height, is perfectly agreeable. A finer description of matting is laid down here. There is a good deal of handsome furniture—consoles, marble and ebony tables, chairs, sofas—quantities of sofas—and a footstool before every seat, these being in universal use. Yet the room looks empty, in spite of a number of nick-nacks distributed over the tables. Cary tells me that in a little time I shall dislike to see it more full, space and air being first luxuries here. I should like, however, now to be able to move the chairs occasionally, which is at present quite impossible when they are made either of ebony or black wood, as they have no castors, and their weight is quite beyond my poor strength. The cabinet-work is generally very clumsy, and the art of polishing, finishing, or varnishing properly is as yet unknown. The height of the doorways corresponds to the height of the rooms, varying from twelve to fifteen feet, and they are very wide: you cannot think how very small we all look when passing through them. The door itself is commonly a mere screen of fluted silk, set in a frame raised two feet from the floor, so as to admit of a free draught of air underneath. These screens are only about four feet deep, just sufficient to prevent any one peeping over them. It would hardly do to have a secret to tell in these most public apartments, there not being one mysterious corner safe from a listening ear. The windows are equally gigantic in their proportions: they all reach down to the floor, opening like French windows; but the shutters are Venetians, folding back on

the outside, and always kept closed during the heat of the day. There are glass casements besides—very wretched glass in very clumsy frames—not often cleaned either, I should think; but as nobody ever wants to look through them, the defect in this department the less matters. The drawing-room windows—three large ones—open on the verandas, as do the windows of the boudoir on the one hand, and the study on the other, forming a most enjoyable suite. The veranda is thus very long—the whole length of the breadth of the house—and very wide; the same height as the storey it shades, supported on each stage by six very handsome pillars, between which always stretches a latticework to keep off the sun, on the same principle as the fluted door-screens within, two feet from the floor all along, and rising a little higher than the head.

The kitchens are all out of doors—cook-rooms they call them here. A small enclosed yard is taken off the compound, inside of which are all these offices; and the wall being covered on the garden side with creeping plants, it is rather ornamental than otherwise. You will wonder I have said nothing about servants' bedrooms. They don't want any. They lay themselves down anywhere—on a landing, in the porch, in the veranda, in a deserted room—some merely protected from the cheenam floor by a mat; a better sort lay a mattress on the mat; a still superior class place over their simple bedding a frame of bamboo covered with a coarse sort of muslin gauze, to protect them from the mosquitoes. The men who sleep on the basement storey, which is often damp, have all a sort of low bedstead, something like our truckle bedsteads, to support their mattress. As for our ayah, she, being a Portuguese Christian, and very grand, has a bedstead like ours, a fine mat, good mattress, cotton sheets, a coverlet for cold weather, and proper mosquito curtains, tucked round her as carefully as our own. She came from Bombay with some lady, who, on going home, left her to Cary as the most precious of legacies, for the native ayahs are not generally good here. I must hunt out the best I can hear of for myself to-morrow, for whose sleeping-frame we have certainly sufficient accommodation in some of the numerous rooms belonging to our apartment.

18th.—We were roused about six o'clock on the morning after our arrival, the 16th, by the announcement that the baths were ready. Everybody bathes every morning, some people twice a day. We in this family all take warm baths, prepared in a large oval tub by the water-carrier; but the general custom is to sit on a little stool in a part of the bath-room fenced in by a six-inch-high border of cheenam, and then have *chatties* (jars) of cold water dashed all over the person. After this most agreeable restorative—the hot bath, not the cold—we adopted a graceful negligé; and Arthur in his dressing-gown, and I in my wrapper, we repaired to the veranda, where we were presented with cups of milk-coffee and a sort of rusk; then opening a shutter in the latticework, we peeped out upon what we agreed in thinking a very pretty town view—a mixture of large white buildings and green trees. Such is the general appearance of Chowringhee, which some few years ago was a mere jungle or thicket, as Calcutta itself once was, and would become again were it deserted by the Europeans. Our observations were cut short by the pain of mosquito bites. They became, as the sun rose higher, so exceedingly irritating, that we were glad to re-enter our dressing-rooms and finish our toilets.

The breakfast hour is nine o'clock. It was served in the study, as much, my sister said, out of regard for the books, as from the comfort of the arrangement: if she were not to have her eye daily upon them, the damp of one season, the heat of another, and the white ants above all, would soon make sad havoc among them. All furniture suffers in a degree from these elements of destruction. The houses even have to be regularly inspected every three years, that any symptom of decay may be arrested at the commencement. I found that

breakfast was a visiting time, one or two friends on an intimate footing dropping in on their way to business. Their conversation did not in the least interfere with our proceedings, and there was no light labour set before us, for the meal appeared to me to be breakfast and luncheon in one. Besides the usual tea, bread, butter, toast, eggs—very small eggs, by the way—there was rice boiled plain white, and rice dyed yellow, curry, fish, and cababs, little thin cutlets highly seasoned, fried or roasted quite dry, and strung upon a skewer. The butter was very sweet, but not rich. It had been made just before it was wanted, in a bottle, I believe, by one of the servants, and cooled by the obdar. Buffalo milk being too poor for use in tea, goat milk is preferred, milked at the moment it is required, and sent up with the froth on it. I thought the bread delicious. There were many sorts of it, white, and light, and sweet; but I hear I shall find it to be tasteless when I forget to compare it with what we have been latterly eating on shipboard.

Edward and one of his visitors went off together, Arthur being to follow in an hour, to try to get all our luggage through the customhouse. Caroline, who had finished her household affairs early in the morning, brought her work into the large drawing-room, ready to listen to all my tales of home, when the bell at the great gates announced more company. A single stroke prepared us for a gentleman, two strokes foretold a lady; we were therefore always certain of the sex of the arriving guest, and plenty of both sorts visited us this forenoon; none of them ostensibly to call on Arthur and me, the etiquette of Calcutta, like that of France, requiring the last importation to wait upon the older residents; but we could not help fancying that curiosity had some share in producing this influx, and Cary was vexed she had not desired the porter to keep the great gates closed, as then nobody would have thought of entering, that being understood to mean in the plainest manner 'Not at home': a very good plan, saving both time and trouble. Arthur returned alone to luncheon, or *tiffin*, as we must call it here—a very substantial repast, served in the dining-room. We had cold meats, fowl very well dressed in a Burdwan stew, some native vegetables, not very good, several dishes of fruit, none of them agreeable to an unpractised taste, wine, and that delightful light bitter beer, cold as ice could make it, the most refreshing of all drinks in this climate—not that it is just now at all too hot. The sun is fierce enough in the middle of the day, and might then for a few hours annoy those much exposed to it, but the temperature within doors is very pleasant. The mornings and evenings are indeed rather cool, and the nights are cold, the thermometer on the landing, each time I have looked at it on my way to breakfast, was only 58 degrees. After *tiffin*, as we were sure of no more interruptions, nobody ever calling so late in the day, we busied ourselves with the contents of one trunk it had been represented we could not do without. I had packed it with a few essentials in case of any delay about the rest of our boxes, and I had also put into it some little presents from the family at home to Edward and Caroline. It contained also the little offerings of their children—copy-books, exercises, drawings, needleworks, gifts so precious to bereaved parents. Poor Cary! she carried them all off to her own apartments, jealous seemingly of any other eyes examining these treasures. She had questioned me minutely about everything concerning the little creatures over and over again, and she had listened with calm interest to my answers, but the sight of the children's handiworks overcame her. I did not meet her again till the seven o'clock dinner, and both she and Edward were quite subdued in spirits all the evening. We retired to bed at ten, the usual hour when there is no company, it being the custom to rise very early in the morning.

Warned by the interruptions of the day before, we were wise enough yesterday to close our gates, as we had a great deal of business to get through. All our

ship luggage arrived, not very much deranged by the unceremonious unpacking and repacking which had been the amusement of the customhouse officers. Also, we had our establishment to arrange; for not only will no servants here wait on more than one master, but every master requires near a dozen servants to assist in attending on himself. The family domestics, therefore, numerous as they are, are useless to us; and so we have to hire a set of our own, moderate as must necessarily be our expenditure. This is no sort of annoyance to our hosts. All servants in this country are on board-wages: where or how they eat nobody seems to mind; they sleep either at their own homes or all about the house, as I have described to you; and those who attend at table follow their masters wherever these may happen to go, to wait on them at every house to which they may be invited. The wages are paid monthly, and are very small, though of course proportioned to the dignity of the different offices. For a few rupees, more or less, they all feed and dress themselves, and furnish their own bedding, receiving little beside their pay, except perhaps a new turban or cummerbund if the master be particular in desiring them to wear the colours of his home livery. Trifling as this sum is, it must be ample, as they are all married, and no women going to service here almost, or indeed doing much labour of any kind, on the husband's earning depends the whole support of the family. The only females in any house are the *ayah*, the *amah* or *dye*, who nurses the children, and the *matronee*, or low-caste waiting-maid.

19th.—We shall very soon have our retinue organized. For Arthur and me, who have, as you know, been accustomed to wait on ourselves, or we should not be now in the far East, to fight our way to fortune in this sultry land, the following train of attendants is considered requisite:—Arthur must have a personal servant, who, doing nothing more than help him to dress and undress, and take care of his clothes, must have two assistants, his mate, who works under him, and a *mehter*, or sweeper—a low-caste person; also a *dirjee*, or tailor, to make and mend: the valet, called a *sirdar*, is the chief of the bearers, or *punkah-wallahs*—literally, *punkah-pullers*; they would carry the palanquin if we had one, and they do all the lighter part of a housemaid's work—an easy enough task where there are neither grates, nor curtains, nor carpets, very little furniture, and the bed-making consisting only of turning a mattress, shaking a pillow, and laying a sheet smooth; they have also charge of the lamps, little glass cups filled with water, having some cocoa-nut oil poured on the top, and a wick set in them. We mean to do with one of these gentry, if we can manage it, at least till the time comes for using the *punkah*. We have also each of us a table attendant, or *kitmudgur*, and one *chuprassie*, or messenger. I must have an *ayah* to wait on me, and a *matronee*, or female sweeper, to wait on her; and I mean to do without a *dirjee*. Just add up all these attendants on a poor barrister and his wife visiting rich relations, who would be living at home with scarce a servant at all. There's a *dhobee* also, or two I believe, to wash our clothes, and a *bheetic*, who brings us all the water wanted. Such a suite sounds very grand; but really one good English maid would go through more work than all these poor creatures together, who sleep, and eat, and smoke, and gossip twenty-two hours out of the twenty-four.

Imagine the number of Caroline's servants. The *sirdar*, who is Edward's valet, his mate, four *punkah-wallahs*, the *dirjee*, *dhobee*, and sweeper, four *chuprassies*, or *hirkarses*—they are called indifferently either—messengers, with their chief, or *jamadar*, who wears a dagger with a tassel to it sticking in his cummerbund—a very great man indeed, devoted to the service of his lady, sitting always outside the drawing-room door, to announce visitors, by preceding them into the presence, and to deliver the messages to his followers, who carry them—a groom of the chambers in fact—three *kitmudgurs*, who wait at table, one of whom has charge of the wines and other

liquors, even helping the guests without interference, no other attendant ever being allowed to touch a decanter: he still goes by the old-fashioned name of *obdar*, for he still cools the wines, though not by the old timesome saltpetre process, now quite superseded by the introduction of ice; then there is a cook and two assistants, a porter, a gardener, and four very splendid gentlemen in scarlet robes edged with gold lace, who carry long silver sticks in their hands, from whence their name of *chobdar*. These ornamental appendages to the great men of the place are paid by the Company, and were originally employed only on state occasions, preceding the judges into court, or the other high officials into their offices; but it has grown into a habit to have two of them ever on duty, and to take one of them out with the carriage, even with the ladies of the great men when visiting. The head of this establishment is the *consomann*, answering to our house-steward, on whom the whole management of the household devolves: he markets, hires the inferior servants, keeps the stores, the plate, and the weekly money. The stable is quite a separate affair: there are two coachmen, who do nothing but drive; a *syce*, or groom, to every horse; and grass-cutters, who have to hunt out and grub up the forage—grass roots—for no herbage is visible till the rains set in, which, with the addition of a small pea called *gram*, used instead of corn, constitutes the food of the horses. Before the children went home, there was a large train of servants kept for them. Besides Caroline's own ayah, and dirjee, and matronee, there was an attendant, male or female, for each child, according to its age, not sex; bearers to drag the little carriage in which the infants took their airings; a *syce* for each pony used by the elder ones; dhobees, dirjee, bheestie—all belonging exclusively to the upper storey where Arthur and I are now established, with very near as full a suite. Were it not for the *consomann*, such a crew of idlers would be rather unmanageable; and as for selecting our portion out of such a poor-looking set as came to offer themselves, we could not have attempted it without his assistance.

The people in this part of Bengal are said to be physically and morally far below the general standard. Caroline's ayah looks down extremely on them. She is certainly active and intelligent beyond the rest; yet I hardly think much of the European blood can now remain amongst these descendants of the early Portuguese merchants. As for their religion, it would be still more difficult to trace any of the genuine gospel in the few traditions of it they retain, mixed up with much of the Mussulman's fatalism, and the superstitious devotion of the Hindoo to caste and custom. One or two of our servants are Mussulmans, a gentle people, more decent in appearance than the lower orders of Hindoos; much better dressed too; no naked portions of dark skin to shock English eyes: they all wear trousers, white or coloured as may be, but tight fitting; a long tunic of white cotton open at the breast, a turban, and a belt when in full dress, slippers when not in presence of their superiors. The *consomann* is very handsomely dressed, as befits his superior station. The *punkah-wahlers*, or bearers, are nearly naked—just a cloth about the loins, and a turban: they all move like phantoms; not a footfall is ever heard; the bare sole treads soundless on the matted floor; the soft dress brushes noiseless against obstructions; there are no doors to shut; the low-toned voice is never obtrusive; they move slowly, never hurry, and they watch those they serve with such scrupulous anxiety, that when once accustomed to our ways, we very seldom have to ask for anything. I am not quite sure that I shall like this sort of forestalling of my inclinations. I felt inclined to rebel to-day at dinner, at ale having been brought to me at the same period of the repast as I had called for it yesterday; but the beseeching manner of my gentle flapper, the fat kitmdugar, made me feel there would be unkindness in refusing him; so perhaps I have condemned myself to Abbott's pale ale during the

rest of our residence in India. We shall have our own servants to-morrow, when we may, I think, represent to them that we dislike what we call officiousness: the feelings of that fat, most civil waiter I could not have wounded.

BARON REICHENBACH'S RESEARCHES.

SECOND ARTICLE.

Of the two classes of sensations produced upon sensitive subjects by magnets, crystals, bodies of high chemical affinity, heat, light, electricity, chemical action, vital action, the human hand, and the heavenly bodies, we forbore in our last article to make special allusion to the second, or the sensations of luminosity which odyllic bodies cause in a darkened room. Our reason was, that the author, although including the luminous phenomena in his earliest treatise, has devoted the subsequent treatise exclusively to this department of the subject, and has laid out systematically the results of his observations on each of the specific luminous appearances that showed themselves.

The Odyllic Glow.—To the sensitive person, a magnet in the dark seems to glow with a feeble light, as if it were phosphorescent or heated; but the light seems quite different from any of the shades of heated iron. In its feeblest form it is a dull dark-gray; but as the intensity increases, it rises to whitish and yellowish, and generally assumes at the northward pole a bluish, and at the southward pole a reddish tint. The two colours of blue and red are as characteristic of the two odyllic poles respectively as the cool and warm sensations; the blue corresponds to the cool agreeable sensation; and the red to the opposite sensation of warmth and discomfort. The action of other magnets greatly modifies the glow of the one specially made use of; and consequently the earth's magnetism has an influence, which comes out by varying the position of the magnet. The intensity of the light, as well as its colour, may be affected by extraneous odyllic agents, in a manner depending on the action of those agents, which action may be either conspiring or conflicting. If the earth's magnetism be made to coincide with the magnetism of a bar, by placing the bar in a conformable position, or with its north end to the north, the colours will be made deeper; while in an opposite arrangement, the glow and colour become dull and turbid. When a horse-shoe magnet is closed by its armature, the glow of the curve is increased, and of the ends diminished; whereas an open magnet is always brightest at the ends. The intensity of the light and colour seems in all cases to be proportional to the intensity of the magnet. The same appearances are shown by crystals and the living hand.

Odyllic Flames.—On this head the baron introduces his experiments in the following terms:—In the preceding experiments on the glow, the flames flowing from the magnetic poles followed everywhere the same course. This phenomenon forms the second degree in the scale of the odyllo-luminous appearances, and consists in a light, which, to the more feebly sensitive, appears as a vague gleam over the poles, but which the more highly sensitive, according to the degree of their perceptive power, saw gradually passing into the aspect of a real flame, under which name they described it. There are magnets which exhibit the glow without the flame, but none which have the flame fail to exhibit the glow. The glow is always the first luminous appearance. I once had a horse-shoe, which had become so weak as not to carry its armature, but still retained perceptible traces of magnetism. I showed it to Mademoiselle Zinkel in the dark chamber, at a time when she was very highly sensitive to odyllic light. She saw the whole magnet glowing, but could perceive over its poles no flame, only a feebly-luminous smoke. When the odyllic intensity is increased, the flame is added. We are entitled to assume that the flame exists everywhere, but we can only speak of it where it becomes visible.

Out of many experiments on various sensitives, he selects as an example the following description by Mademoiselle Atzmansdorfer:—'Towards the end of summer, when she is generally better, she saw, on a weak bar magnet of twenty inches, flames little more than an inch in height. At the same time she saw, on the poles of a seven-bar horse-shoe, flames of eight inches high. Afterwards, when more sensitive, the largest of my magnets, a heavy horse-shoe of nine cast-steel bars, was placed before her in the dark. Although she did not know which magnet was used, she saw again, as she had done a year before, flames of fully five feet in height burning on both poles. They were so large, that when the poles were upwards, they rose, and united into a column of fire. She could see, by the somewhat different colours of the flames given out at the two poles, that this column was formed of two, the one yellowish-white, the other bluish; the former smaller than the latter. The whole dark chamber was so illuminated by them, that she could see in it the outlines of all objects. Between the limbs, which had a white odylie glow, she saw the whole space filled with threads of flame, and the outer surface of the steel enveloped all round in a fiery down, which undulated, and appeared to flow sometimes towards one pole, sometimes towards the other. At the planes of junction of the lamellæ, and at their edges and covers, where they form the poles, there were separate small flames flowing out laterally, and strongest on the outer corners, where they at last ended in sparks, which flew singly away.'

The author made a great number of observations on those flames, with a view to detect all their peculiarities. He describes the effects of the contact of the magnet with other magnets in all possible ways; but perhaps the most singular feature attending them is their upward motion and susceptibility to the breath. They can be blown or fanned about like a column of smoke. This would seem to indicate that they are some ponderable substance like air, or the illumination of a ponderable medium, either air or something that air can impel hither and thither. Whether or not it be illuminated air, can be tested by placing the magnets in the exhausted receiver of an air-pump, which, as we shall afterwards see, was actually done.

The author makes the following practical application of the experiments regarding the odylie flames:—'In concluding these details concerning the odylie flame, I shall make one more practical application. It is a fable widely spread in Germany, and which has been often made by our dramatic poets the ground-work of the most striking scenes, that ghosts, witches, and devils, assemble for their hellish dance by night on the Blocksberg. Everything in the world, even such a fable as this, has a cause or origin in nature; and we can now see that this myth is not destitute of a natural foundation. It has long been known that high on the Brocken there are rocky summits which are strongly magnetic, and cause the needle to deviate. More minute investigation has proved that these rocks contain disseminated magnetic iron ore or lead-stone; as on the Ilsestein, the Schnarcher (Snorer), &c. The necessary consequence is, that they send out odylie flames. Now when persons of high perceptive powers for odylie light happened to come on such places in a dark night, as must often have been the case with hunters, charcoal-burners, poachers, woodcutters, &c. they necessarily saw, on all sides, delicate flames of different sizes and colours, flaming up from the rocks, and in the currents of air flickering hither and thither. Who could blame these persons, imbued no doubt with the superstitious feelings of their age, if they saw, under these circumstances, the devil dancing with his whole train of ghosts, demons, and witches? The revels of the Walpurgisnacht (the night which ushers in May-day) must now, alas! vanish, and give place to the sobrieties of science—science which, with her torch, dissipates one by one all the beautiful but dim forms evoked by phantasy.'

Odylie Threads, Fibres, Down.—Magnets, besides the

polar flames at their edges and solid angles, emit lights in the form of a fibrous down. Mademoiselle Atzmansdorfer saw, 'both in a nine-bar and in a seven-bar horse-shoe, the space between the limbs full of fibrous flames, and the whole surface of the magnet clothed in a fine fiery down.' 'These delicate emanations also exhibited colours. Mademoiselle Zinkel saw the down between the limbs of the simple horse-shoes, red on the one side, and blue on the other, playing into one another, so that the interior space had a variegated appearance. With compound horse-shoes, this was still more strongly marked, because each limb, from the stratification of colours in it, had both red and blue down, extending, within and without, from the poles to the curve.' The author observes with reference to the nature of this appearance:—'I do not regard these appearances as of a peculiar kind, but rather consider them as of the same nature with odylie flame generally. The cause of them probably lies in inequalities in the efflux from the minutest points of the surface of the magnets. Since we know that edges and solid angles give rise to stronger emanations, I think we are justified in concluding that finer inequalities may serve as points of efflux, and thus give rise to the formation of threads, fibres, and a downy form of light. They are locally concentrated currents of odyle in the general odylie current, blue from the negative, and red from the positive pole.'

Odylie Smoke.—'Mademoiselle Zinkel saw, in a series of experiments, to enumerate which would be tedious, on every magnet of any power the red flame passing into a thick, heavy, feebly luminous, reddish-yellow smoke, and the blue flame ending in a fine, ethereal, grayish-blue vapour. On smaller and simple horse-shoes, these cloudy emanations were from four inches to a foot or more in length; on the nine-bar magnet often as long as an arm, and when it had been strengthened, six and a-half feet long. Magnets of great intensity appeared to her, especially during the catamenia, covered near the poles with a thin vapour. Above the stratified flames of compound horse-shoes, she saw the smoke rise to the length of an arm. . . . In the presence of Mademoiselle Atzmansdorfer, and in the dark, I drew lines with phosphorus on paper, and showed her the luminous vapour arising from it, and also the effect of blowing on it. She assured me that it had the greatest resemblance to the odylie smoke, except in the intensity of its light, that of the odylie smoke being beyond comparison paler and feebler; it was also not so green, but more blue and reddish.'

The author is of opinion that the flame and smoke 'are perhaps only the same phenomenon, varying on the one hand in degrees of intensity, and on the other differently perceived according to the sensitiveness of observers, or in the same observer according to the more or less perfect development of his perceptive power, either from variations in his natural state, or from the effect of longer or shorter exposure of the eye to perfect darkness.'

Odylie Scintillations.—'The finest development of this phenomenon was seen by Mademoiselle Zinkel in a large electro-magnet, excited by the current from a powerful Smees's battery. Not only did the sparks fly out on all sides from the large variegated flame, but they formed a shower, or rather a stream, which rose constantly to the ceiling. They were so bright that she could not conceal her astonishment at my not being able also to see them. . . . The occurrence of this phenomenon, established as it is by the unanimous and uniform testimony of so many sensitives, both diseased and healthy, and confirmed by countless repetitions, admits of no doubt. I do not allow myself for the present to form any conjectures as to its nature, or even the relation which it bears to the other phenomena of magnetism or of odyle with which it is associated. I can here only establish the physical fact, as it actually presents itself to the eyes of the sensitive.'

The baron next goes on to detail the results of experiments upon the effect of the pressure of the atmosphere upon the different luminous appearances above described. By enclosing magnets in the receiver of an air-pump, and exhausting the receiver, he found that almost every form of the light became much brighter and stronger; the glow was more intense, and flames more brilliant. The smoke does not follow the same law; extreme rarefaction had the effect of causing it to disappear. Thus it would seem that magnets actually emit a ponderable effluvia, just as odorous bodies emit an effluvia of smell, but of an excessively thin and feeble character, requiring an exalted sensibility for its detection. There is thus suggested to us the existence of an entirely new property of matter, such as, if thoroughly cleared up, may throw light upon the parallel property of smell, which is not in all cases explained by the evaporation of volatile ingredients.

Colours of Odylc Light.—We cannot enter into the author's minute researches on this part of the subject, intended to prepare the way for the identification of the aurora with the odylc appearances. He found, on close examination, that the light at the poles of the magnet was not of a single colour, but an iris succession of colours more or less complete, one being predominant at each pole. He sums up the phenomena in their application to the aurora as follows:—"But now that we know, from the preceding researches, that flaming lights exist over magnetic poles larger than the magnets from which they flow; when we learn that these flaming appearances are movable, undulating, often moving in serpentine windings, like those of a ribbon agitated by the wind, becoming at every moment larger or smaller, shooting out rays, scintillating, variegated in colour, and often nebulous, vaporous, and cloud-like; when we find that with our breath we can cause it to flicker backwards and forwards; when we observe that it increases in a rapid ratio, in size, intensity, and brilliancy, in rarefied air; and lastly, when we see it followed at every step by the play of rainbow colours, &c. &c.—there remains hardly one essential mark of distinction between magnetic light and terrestrial polar light; unless we regard as such the difference of intensity and amount of light, in virtue of which the polar light is visible to every ordinary eye, the magnetic light only to the sensitive eye."

"The undulations and serpentine windings which the aurora borealis often displays, are, on the supposition of the identity of the two lights, naturally and simply explained by the motion of the wind, which causes the light of the earth to wave to and fro in more or less rarefied strata of air, precisely as our breath does with the odylc light of magnets. The constant alternations of greater and smaller size in the aurora, correspond exactly to the unsteadiness of the magnetic light in our experiments. The powerful light from great and undetermined heights in the atmosphere, observed by some travellers to lie higher than the higher clouds, agrees beautifully with our observations on the magnetic light in the exhausted receiver, where the odylc light increased strikingly in size and brilliancy under half of the ordinary atmospheric pressure. But the equally well-attested and even more numerous observations of other travellers, who have studied numerous polar lights with the most conscientious attention in the polar regions, to whom their height appeared very much less, and who often described them as luminous clouds, also harmonise perfectly with the nature of the odylc light of magnets. We have very frequently, in the course of these researches, met with the odylc phenomena of luminous nebulae or vapours, flame-like smoke, or whatever name may be given to the varieties of this appearance. It also increased in strength under diminished pressure. This is the cause of the appearance of luminous clouds constantly rising, which render complete the parallel between the odylc light of magnets and the polar light of the earth."

"In connection with this part of the subject, an old

remark made by the Swedish philosopher Wilke deserves to be recalled to memory—namely, "that disturbances of the magnetic needle always precede the appearance and the motions of the aurora borealis." This, as we have seen, agrees most exactly with the phenomena of odylc light; for these always occur later and more slowly than the associated magnetic or electric effects, which are only followed by the odylc effects after an observable pause. The same facts which I have ascertained in my dark chamber were, therefore, many years ago noticed in the wide expanse of heaven by other observers."

The editor has added a short appendix, in which he describes experiments made by himself, in corroboration of Baron Reichenbach's results. It is obviously desirable that the experiments should be repeated as much as possible; but we must bear in mind that they require all the nicety and precautions belonging to any other abstruse department of experimental research, and cannot be done justice to by the random attempts of unskilled curiosity and imperfect appliances.

HOW TO LIVE IN LONDON ON A SMALL INCOME.

THERE have been many useful little books published within the few last years, under such titles as 'The Poor Gentleman,' and 'How to Live on Fifty Pounds a Year.' They profess to point out to persons of very straitened incomes how they may contrive to maintain an appearance of *outward respectability* on the slenderest means—on an income, in fact, very little superior to the ordinary, and far beneath that of the skilled, mechanic. I cannot help thinking, however, that most of these little books are to a certain extent *made up*, and not the result of real experience or even direct observation, because I find in some the various items of expenditure entirely disproportioned to the gross income, while in others they seem to fall short of what may be fairly appropriated to each charge. I, unfortunately, can write on this subject from experience, for it so happens that, having been, by unforeseen calamity, reduced from two thousand a year to a mere pittance, I have been compelled for a twelvemonth past to realise something like the very problem involved in the second title above quoted. I am now, in short, a poor gentleman. If the reader chooses to listen for a brief space to my story, I think he will be informed of the chief arrangements actually required to maintain a respectable existence on the scale in question.

Having come to the metropolis in hope of procuring some employment, about the spring of last year, I secured a very pleasant furnished lodging, in the best part of Notting Hill, at 6s. a week. My domicile consisted of a small sitting-room and bedroom, not quite so lofty or spacious as apartments would generally be in *Belgravia*, but sufficiently large and airy to answer my purpose. Bed and table linen, and attendance at breakfast, the only meal I took at home, were included in the rent. The literary pursuits in which I shortly became engaged fully occupied the day. I may here remark with what pleasure I became in a little time aware of the ample resources which are at the command of the poor student in London. Independent of our splendid National Library at the British Museum, there are two others—that of *Sion College*, and *Dr Williams's* in Red Cross Street—which contain very valuable collections of books. There is also for the Oriental scholar an excellent library at the *East India House*; and all these, by the liberality of the trustees or directors, are easily accessible to any respect-

able person. Previous to the setting in of winter, I removed to a comfortable lodging in a very airy street, in the vicinity of Leicester Square, paying for a bedroom, with attendance as before, 6s. 6d. a-week. My days passed away cheerfully, for my mind being fully occupied, had no leisure to turn inwards, and reflect on the vicissitudes I had experienced. The labours of the day over, I repaired to the Whittington Club, to partake of a frugal dinner, followed by coffee, after which the remainder of the evening till midnight was generally passed in the reading or drawing-room of the club.

I will now proceed to detail my weekly expenditure, which has, from stern necessity, been confined within such narrow limits as not to admit, even in the extreme rigour of winter, of a fire in my room to breakfast by. But although at first this comfort is missed, it is surprising how soon one becomes accustomed to the want.

Lodgings, including cleaning of shoes, - - -	s. d.
Breakfasts (tea, sugar, milk, butter, and bread), -	7 1
Dinners (coffee, and biscuits), - - -	1 4
Washing, - - - - -	5 6
	1 2
	15 1

Being per annum, L.30, 6s. 6d.

Sundays being always passed with some friends, I have not included in my expenses, though I should on this account put down occasionally a sixpence for a bus; nor have I set down anything for wearing apparel, for, being possessed of a good stock of all descriptions of clothes, I have not had occasion during the twelve-months to expend more than a pound in this way. What I have given above is actually and *bona fide* a true return of my personal expenditure; and it will, I think, prove what can be done, when the exigency of the case requires it, by a determined course of the most stringent and rigorous economy, and by the unwearied exercise of self-denial and uncomplaining patience.

I am sensible, however, that it is on much too limited a scale for a young person with a moderately good appetite, nor would I recommend it to such a one, as, unless compelled thereto by dire necessity, it would be inconsistent with the generous feelings of youth, and would, if indulged in, necessarily lead to mean and miserly habits, which I am the last to hold up to imitation. But I will proceed to offer what I consider to be a tolerably fair estimate for a bachelor, who is compelled only to live frugally, not narrowly. As a necessary preliminary, without which all the rest is mere moonshine, I will suppose him, either from the sharp spur of adversity, or from having been originally condemned to narrow means, to have acquired that self-discipline, and those fixed habits of self-control, which will enable him to submit cheerfully to his lot. I believe that the following scale will suffice for a person of limited means and of moderate desires; and if he should not consider it enough, London is just the place where, in some way or other, by the exercise of his wits, he may generally find the means of adding to it:—

Lodgings per week, - - - - -	s. d.
Plain breakfasts, - - - - -	2 6
Dinners (tea or coffee, and biscuits), - - -	9 0
Washing, cleaning boots, &c. - - -	2 6
Pocket-money, - - - - -	5 0

Per annum, L.66, 6s.

The list of prices for breakfast and dinner are those of the minimum class at the Whittington Club; but should it not suit a person's taste or inclination to join that institution, he can live for nearly the same money at any respectable eating or coffeehouse; and the two guineas which he would have to pay as an annual subscription to the club will about pay the fees to waiters, &c. I have not made any allowance for wine, beer, or spirits, as they are scarcely attainable, where the income is very limited, without the sacrifice of something more essential. I can only say for myself that, after having been in the habit of taking a moderate quantity of wine,

I never enjoyed better health, and, as I think, more even spirits, than since I have been obliged to drink plain water; and as a proof that fermented liquors do not render a person more capable of undergoing any extra fatigue, I will mention that I am sometimes in the habit of walking from seven to eight or nine miles without feeling any inconvenience.

It may be some consolation to those who either have met with, or expect, reverses of fortune, to know that I can now, from personal experience, solemnly assert that I am a much more contented, and consequently a much happier man, than when I was in comparative affluence. I will suppose that a young man is not without some friends, or probably relatives, in this great metropolis. In such a case I would recommend him not to be too eager to jump at every invitation to dinner, &c. He will best preserve his independence, and be a more welcome guest at other times, by occasionally declining to avail himself of the proffered hospitality. At the same time there are many little services which he may derive from worthy acquaintance; and, as it occurs to me at the moment, I would advise him to be directed in the choice of a laundress by some respectable family to whom he may be known. Both in the prices charged, and the manner in which his linen is attended to, he will find the advantage of this hint. Estimating an income at barely a hundred a year, I think the margin I have left, of upwards of thirty pounds, will, at the present extremely moderate prices of every article of dress, be found sufficient for that branch of necessities. A person who aims only at appearing gentlemanly, will be more likely to secure real and desirable friends, than by aiming at finery, which he must procure either by contracting debts, or pinching himself in some more requisite expense. In the play of the 'Poor Gentleman' there are some admirable remarks on the *meanness* of incurring debts which a person knows he cannot calculate on honestly discharging, and the loss of that independence and peace of mind which assuredly awaits the embarrassed man. I would advise that the bill for lodgings, &c. &c. should be settled weekly, and that purchases of every kind should be made for *ready money*, which will be found, on the average, to involve a saving of from 20 to 25 per cent.—no small consideration to a man to whom we will suppose every shilling has its value. If a person has a fixed employment, he will of course have his time fully occupied; if he has not, he need not be wholly idle. Books and study should form a part of the daily distribution of his time. Although public amusements must be but sparingly partaken of, they need not be wholly eschewed. The Amphitheatre at the Haymarket, the boxes at the suburban theatres, and the pit at the minor ones, are all at the same price (two shillings). London abounds with places of worship of all denominations, and at many of these there are free sittings. St Paul's and Westminster Abbey will rise to every mind, as places where the beautiful cathedral service is admirably performed. The musical parts of the ordinary service are also presented very beautifully by the pupils of the Royal Academy of Music, at the Hanover Square Chapel, and by a full choir at St Mark's, Clerkenwell, at the church in Wales Street, and at St Paul's, Knightsbridge.

Before concluding these brief remarks, I will advert to a subject which I deem to be of paramount importance to all persons whose incomes are of a very restricted nature. I will simply premise that I have no wish to 'write up' the Whittington Club; nor, indeed, does it stand in need of such support. The public are gradually becoming acquainted with its merits, as is evinced by the number of members—now about 1900—who support it. What I have simply to remark is, that the varied and rational character of the amusements offered by this club, for the very moderate subscription of two guineas per annum, seems to render it a very suitable resting-place for the poor gentleman. I will just go through the weekly list, merely stating that in the three

summer months—from June to September, when persons are more disposed to breathe the pure air out of doors—some, but not all, of these are suspended:—

On Monday Evenings,	Class for Historic and Dramatic Literature.
... Tuesday ...	Music, Dancing, and Conversation.
... Wednesday ...	Discussion Class for subjects of general interest.
... Thursday ...	A Lecture, generally by some eminent professor.
... Friday ...	French Elocution Class.
... Saturday ...	English Elocution Class.

With the exception of the historic and dramatic class, the subscription to which is 2s. 6d. per quarter, the whole of the entertainments enumerated in this list are free to every member of the club who may choose to attend. In addition to these, a monthly concert of vocal and instrumental music is given on Monday evenings by the amateurs of the club, assisted occasionally by a few professionals, and which may fairly challenge comparison with most amateur performances. There are two reading-rooms, amply supplied with numerous London and provincial journals, French and German papers, five quarterly journals, and all the most popular weekly and monthly magazines, papers, and serials. To the man not overburdened with money, the advantage of good fires and well-lighted rooms will suggest itself.

I have now performed my task. But before I bid adieu, let me urge you, gentle reader, if you are living on a slender income, without any regular employment, to devote some hours of every day to the perusal of such books as may be most congenial to your taste. Whatever you do, do not waste the whole of your time in listless indolence. If you are young and active, cricket, rowing, fives, football, &c. may vary your more solid occupations; but the mind requires to be exercised, to prevent its relapsing into the morbid condition so beautifully described in that touching passage—'My soul is weary of my life: I will leave my complaint upon myself: I will speak in the bitterness of my soul.'

A HUNTER'S LIFE IN SOUTH AFRICA.*

SOME years ago the London public were edified by the exploits of an amateur thief-catcher, who was accustomed to lie in wait for rogues as rogues lie in wait for true men. No sooner was a robbery detected, than off he set in pursuit, heading the police like a greyhound, and tearing down his prey before anybody else could come up. This virtuous individual was the son of a baronet; and all the account he could give of his motives was, that in devoting his time and thoughts to the capture of depredators, he merely obeyed an instinct. This was a curious instance of that oddly-directed enthusiasm which receives the name of hobby or monomania, according to the disposition of the observer; but it was a very insignificant aberration from the beaten path compared with the Nimrod-ic passion which haunts the mind of Mr Roualeyn Gordon Cumming of Altyre.

We know that many gentlemen, who look with disgust upon the trade of a butcher, take excessive delight in stealing upon the solitude of a deer, and slaughtering him before he has time to fly; and we know that in India, and other foreign countries, there is nothing considered so exhilarating as one of those tiger hunts by which the tedium of intertropical life is occasionally broken. But to turn into a profession the stalking deer and combating beasts of prey—to abandon, for the sake of the indulgence, the comforts and decencies of civilised life, submitting to hunger and thirst, heat and

cold, and herding with savages and wild animals, and all for many years at a stretch—is surely the very sublime of eccentricity. Salmon-fishing and roe-stalking were the amusements of Mr Cumming's boyhood in the wilds of Morayshire. Then he joined his regiment in India, landing at the Cape to enjoy a bang at the smaller antelopes in the neighbourhood of Cape Town. After hunting for some time in India, he returned in bad health to stalk deer in the Scottish forests; but tiring of the tameness of the sport, he obtained a commission in the Royal Veteran Newfoundland Companies, looking upon it as a license to shoot in the hunting-grounds of the Far West. Disappointed in this view of his commission, he exchanged into the Cape Riflemen, and popped at quails for some time in the country of the Amapoonda Caffres. There was no man-shooting, however, to be had for love or money, the savages being villanously quiet; and he at length made up his mind to sell out of the army for good and all, and declare war on his own account against the wild beasts of the interior.

The expedition he fitted out on what the small sportsmen of this country would consider a princely scale, although he subsequently added greatly to its magnitude—having at one time three enormous wagons drawn by twelve oxen each, with a suitable number of native servants, horses, and provisions in proportion. His 'sinews of war' were neither money nor bank-notes, but goods of different kinds, such as cheap guns and beads, to barter with the natives; for Mr Cumming had an eye to the main chance as well as to sporting and natural history, and was determined to bring home not only a cabinet of prepared specimens, but a cargo of elephants' tusks. All being ready, he set forth into the wilderness, and startled the wild clans with the apparition of a hunter such as they had never seen, and probably never will see again.

On went the wagons, tearing through forests, where the axe was frequently obliged to pioneer their way—over swamps and rocks, across hills and deserts—

* Thorough brake, thorough brier,
Thorough muck, thorough mire,
Thorough water, thorough fire!

At their head, with his rifle over his shoulder, was the master-hunter, a tall, stout man of fourteen stone, dressed in a Highland kilt and wide-awake hat, with a long beard hanging upon his breast, and his arms naked to the shoulder. Sometimes he met with a Boer as solitary as himself, encamped in the wild, in a small tent, and surrounded by his flocks and herds; but as the renown of his exploits spread abroad, he was himself followed by families of the Caffre tribes, the number of from one to two hundred men. 'These men were often accompanied by their wives and families; and when an elephant, hippopotamus, or other large animal was slain, all hands repaired to the spot, when every inch of the animal was reduced to blitongue—namely, cut into long narrow strips, and hung in festoons upon poles, and dried in the sun; even the entrails were not left for the vultures and hyenas, and the very bones were chopped to pieces with their hatchets to obtain the marrow, with which they enriched their soup.'

Besides the Caffres, our adventurer provided liberally for the birds and beasts of prey which assembled to dispute with him the carcase of his quarry. The black and white carrion crows came first, and then the vultures; and warned by the voice of the latter, the jackals sneaked out of their holes from far and near, and all

* Five Years of a Hunter's Life in the Far Interior of South Africa, &c. By Roualeyn Gordon Cumming, Esq., of Altyre. 2 vols. London: Murray. 1859.

crowded round the feast. But the jackals occasionally made their appearance in better time, and actually assisted him to capture his prey. 'In the more distant hunting-lands of the interior it sometimes happens that the lion assists the sportsman in a similar manner with the larger animals; and though this may appear like a traveller's story, it is nevertheless true, and instances of the kind happened both to myself and to Mr Oswell of the Honourable East India Company's Service, a dashing sportsman, and one of the best hunters I ever met, who performed two hunting expeditions into the interior. Mr Oswell and a companion were one day galloping along the shady banks of the Limpopo, in full pursuit of a wounded buffalo, when they were suddenly joined by three lions, who seemed determined to dispute the chase with them. The buffalo held stoutly on, followed by the three lions, Oswell and his companion bringing up the rear. Very soon the lions sprang upon the mighty bull, and dragged him to the ground, when the most terrific scuffle ensued. Mr Oswell and friend then approached, and opened their fire upon the royal family; and as each ball struck the lions, they seemed to consider it was a poke from the horns of the buffalo, and redoubled their attentions to him. At length the sportsman succeeded in bowling over two of the lions, upon which the third, finding the ground too hot for him, made off.'

The native followers, too, assisted sometimes in the chase which fed them; but they sponged without shame upon other hunters of the wilderness, such as the wild dogs. These animals hunt the antelope in packs, the evolutions of which appear to be regulated by what might seem a kind of language, so different are the tones in which their various calls are made. They are unable to crack the larger bones of the prey; and when the natives have the good fortune to be beforehand with the hyenas (which do not come out before sunset) in finding the remains of their meal, they seize greedily upon the marrow-bones, and devour their contents raw. There is another denizen of the wild who depends upon the prowess of his neighbours, being unable to do anything himself but point the way to the prize. This is the honey-bird. 'This extraordinary little bird, which is about the size of a chaffinch, and of a light-gray colour, will invariably lead a person following it to a wild-bees' nest. Chattering and twittering in a state of great excitement, it perches on a branch beside the traveller, endeavouring by various wiles to attract his attention; and having succeeded in doing so, it flies lightly forward in a wavy course in the direction of the bees' nest, alighting every now and then, and looking back to ascertain if the traveller is following it, all the time keeping up an incessant twitter. When at length it arrives at the hollow tree, or deserted white ants' hill, which contains the honey, it for a moment hovers over the nest, pointing to it with its bill, and then takes up its position on a neighbouring branch, anxiously awaiting its share of the spoil.' The honey-bird, however, is not to be trusted without caution; for sometimes—through misconception, it is to be charitably supposed—instead of leading to a deposit of honey, it lands the unwary pursuer in the mid-day retreat of a lion, or the den of a crouching panther. Our author once followed this equivocal ally to the banks of a river, and to his great surprise found that his introduction was to be to an enormous crocodile.

The adventurer's first shot of any consequence was at a springbok—a species of antelope so called from the extraordinary bounds it takes into the air when pursued. 'They bound to the height of ten or twelve feet with the elasticity of an India-rubber ball, clearing at each spring from twelve to fifteen feet of ground, without apparently the slightest exertion. In performing the spring, they appear for an instant as if suspended in the air, when down come all four feet again together, and striking the plain, away they soar again, as if about to take flight.' These animals in their migrations are

compared to swarms of locusts. 'I beheld the ground to the northward of my camp actually covered with a dense living mass of springboks, marching slowly and steadily along, extending from an opening in a long range of hills on the west, through which they continued pouring, like the flood of some great river, to a ridge about a mile to the north-east, over which they disappeared. The breadth of the ground they covered might have been somewhere about half a mile. I stood upon the fore chest of my wagon for nearly two hours, lost in wonder at the novel and wonderful scene which was passing before me, and had some difficulty in convincing myself that it was reality which I beheld, and not the wild and exaggerated picture of a hunter's dream. During this time their vast legions continued streaming through the neck in the hills in one unbroken compact phalanx. At length I saddled up, and rode into the middle of them with my rifle and after-riders, and fired into the ranks until fourteen had fallen, when I cried "enough!" On another occasion 'some hundreds of thousands of springboks were within his vision' on a single plain; but an old Boer told him that the sight was nothing to what he had seen. "You this morning," he remarked, "behold only one flat covered with springboks, but I give you my word that I have ridden a long day's journey over a succession of flats covered with them, as far as I could see, as thick as sheep standing in a fold."

The oryx, or gemsbok, a much rarer antelope, attracted our author's special admiration. It has the erect mane, long, sweeping, black tail, and general appearance of the horse, with the head and hoofs of an antelope; but the grand peculiarity of the animal is its entire independence of water, which Mr Cumming believes it never tastes. Well would it have been for the hunter if he too had been destitute of the sense of thirst! In his chase of the interesting prey, he lost himself in the wilderness, and suffered frightfully from the want of water. Night came on, and he lay down in the open plain to sleep, with no other clothes on his person than a shirt and a pair of knee-breeches. Shivering with cold, and almost frantic with thirst, he thus lay in the howling waste till morning. The marauding Bushmen depend for safety in the aridity of the deserts they have to cross on their forays upon the Boers and Caffres. The drier the season is, the more energetic are these pedestrian warriors, each of whom conceals for his own use, at regular intervals along the track, a supply of water in ostrich eggs; and knowing that he can only be pursued on horseback, feels secure in the inability of such animals to do without the like refreshment. The Bushmen, too, in driving away a spoil of cattle, travel night as well as day, while their mounted enemies lose the track if they advance after the sun goes down.

The ostrich, whose eggs are thus turned to so important a use, becomes itself the certain prey of the Bushman, if he has only the good-fortune to stumble upon its nest; for he ensconces himself within the ample precincts, and awaits patiently the return of the unconscious proprietor. At other times he clothes himself in the skin of one of these birds, and stalks about the plain like one of themselves, till he is near enough for a poisoned arrow to do its work.

Another species of antelope, a wildebeest, exhibited an extraordinary instance of public virtue when our adventurer, concealed near a pond, was on the watch for a shot at its friends. This was an old-gentleman wildebeest, who, chancing to discover the retreat of the hunter, established himself as sentry over him, keeping just beyond rifle-range, and driving away each troop of his fellows as they advanced to drink. But at length there approached a bevy of lady wildebeests, who, with the heedlessness of their sex, only tossed their pretty heads at the warning of the Mentor, and came bounding on. The old gentleman was desperate. He entirely forgot the prudential rule he had laid down for himself; and coming within range, he received from the vindictive hunter a shot which made him dart off at full speed,

and leave the dangerous and endangered sex to their fate.

On another occasion Mr Cumming fell asleep in his lair, after having discharged both barrels of his rifle, and was awakened by a dream of lions. 'I awoke with a sudden start, uttering a loud shriek. I could not for several seconds remember in what part of the world I was, or anything connected with my present position. I heard the rushing of light feet, as of a pack of wolves, close on every side of me, accompanied by the most unearthly sounds. On raising my head, to my utter horror I saw on every side nothing but savage wild dogs, chattering and growling. On my right and on my left, and within a few paces of me, stood two lines of these ferocious-looking animals, cocking their ears and stretching their necks to have a look at me; while two large troops, in which there were at least forty of them, kept dashing backwards and forwards across my wind within a few yards of me, chattering and growling with the most extraordinary volubility. Another troop of wild dogs were fighting over the wildebeest I had shot, which they had begun to devour. On beholding them, I expected no other fate than to be instantly torn to pieces and consumed. I felt my blood curdling along my cheeks, and my hair bristling on my head. However, I had presence of mind to consider that the human voice and a determined bearing might overawe them; and accordingly, springing to my feet, I stepped on to the little ledge surrounding the hole, where, drawing myself up to my full height, I waved my large blanket with both hands, at the same time addressing my savage assembly in a loud and solemn manner. This had the desired effect: the wild dogs removed to a more respectful distance, barking at me something like collies. Upon this I snatched up my rifle, and commenced loading, and before this was accomplished, the entire pack had passed away, and did not return.'

This conclusion, however, does not satisfy the reader's sense of justice, for ambush-fighting is never respectable. Our author, however, is of opinion that animals are made to be torn to pieces. In describing the horrible suffering of a noble gnou, which was destroyed by wild dogs, he says pathetically, 'Poor old bull! I could not help commiserating his fate. It is melancholy to reflect that, in accordance with the laws of nature, such scenes of pain must ever be occurring; one species, whether inhabiting earth, air, or ocean, being produced to become the prey of another. At night I watched the water, with fairish moonlight, and shot a large spotted hyena.' On another occasion he succeeded in slaughtering a fine white female rhinoceros, which reeled with the last shot, spouting torrents of blood from her mouth and wounds, and screaming as she died. One can scarcely imagine a human being feeling pleasure in such a sight as this; but we must make some allowance for those who go so far beyond the sound of Sabbath bells, and enter into such wild warfare. When Mr Cumming saw groups of vultures gathering over another part of the forest, and knew that it was for the obsequies of an eland—the most magnificent of the antelope tribe, larger than an ox—which he had mortally wounded in the morning, while tears trickled from the creature's large dark eyes, his satisfaction appears to have been at its height. 'That night I slept beneath the blue and starry canopy of heaven. My sleep was light and sweet, and no rude dreams or hankering cares disturbed the equanimity of my repose!'

The rhinoceros above-mentioned, unfortunately for her, was unattended by her guardian angel—the rhinoceros-bird. This little creature warns the huge animal of the approach of enemies, by uttering in his ear a harsh grating cry. 'I have often hunted a rhinoceros on horseback, which led me a chase of many miles, and required a number of shots before he fell, during which chase several of these birds remained by the rhinoceros to the last. They reminded me of mariners on the deck of some bark sailing on the ocean, for they perched along his back and sides; and as each of my bullets told on

the shoulder of the rhinoceros, they ascended about six feet into the air, uttering their harsh cry of alarm, and then resumed their position. It sometimes happened that the lower branches of trees, under which the rhinoceros passed, swept them from their living deck, but they always recovered their former station; they also adhere to the rhinoceros during the night. I have often shot these animals at midnight when drinking at the fountains, and the birds, imagining they were asleep, remained with them till morning, and on my approaching, before taking flight, they exerted themselves to their utmost to awaken Chukuroo from his deep sleep.' The source of their interest in the rhinoceros is in the ticks and other insects that swarm upon his skin.

Another huge mammal, the hippopotamus, appears, from our author's account, to be pretty nearly as harmless and respectable an animal in his native rivers as the individual in Regent Park. He attacked three at once, and after wounding the one he selected, a female, dashed into the waters after her up to the armpits. But the slaughter of the poor helpless brute is too disgusting a story for our readers, and is one of the numerous instances of bad taste afforded by the book. This was a huge creature, five feet broad across the belly. The only difficulty in this kind of sporting arose from the enormous weight of the animals. The river in one portion of the route seemed to be alive with the unwieldy creatures, wallowing in the water in droves of twenty or thirty at a time. The crocodile appears to live on good terms with his scarcely less amphibious neighbours; and our author was astonished at the great size of the former, one individual appearing to be 16 or 18 feet long, with a body as thick as an ox. 'The next minute, one of them popping up his terrible head in the middle of the stream, I made a beautiful shot, and sent a ball through the middle of his brains. At first he sank for an instant to the shot, but instantly striking the bottom with his tail, he shot up above the water, when he struggled violently, sometimes on his back, and then again on his belly, with at one time his head and fore-feet above the water, and immediately after his tail and hind-legs, the former lashing the water with a force truly astounding. Clouds of sand accompanied him in all his movements, the strong stream carrying him along with it, till at length the struggle of death was over, and he sank to rise no more.'

An adventure with a snake—for nothing came amiss to our hunter—is illustrated by an engraving, in which his Caffre servant is seen with the creature's tail over his shoulder, and Mr Cumming grasping its body, and with his foot against a rock for purchase, as they are endeavouring to drag their prey from the hole in which he has taken refuge. The serpent is 14 feet long, and proportionably thick, and both men are unarmed. When they succeed in extricating him, he 'springs at them like an arrow,' and 'snaps with his horrid fangs' within a foot of the hunters' naked legs; but Mr Cumming merely slips out of his way, and picking up a green bough, belabours him with it till he at length kills him. St George's adventure with the dragon was nothing to this, either as regards the fearlessness of the knight or the marvellousness of the event.

The camelopard is another of our author's familiar acquaintances, and we are glad to turn to him from such strange bedfellows as snakes and crocodiles. This gigantic animal is usually found in herds of sixteen, although Mr Cumming sometimes saw thirty, and even forty, in one company. 'These herds are composed of giraffes of various sizes, from the young giraffe of 9 or 10 feet in height, to the dark chestnut-coloured old bull of the herd, whose exalted head towers above his companions, generally attaining to a height of upwards of 18 feet. The females are of lower stature, and more delicately formed, than the males, their height averaging from 16 to 17 feet. Some writers have discovered ugliness and a want of grace in the giraffe, but I consider that he is one of the most strikingly beautiful animals in the creation; and when a herd of them is

seen scattered through a grove of the picturesque parasol-topped acacias which adorn their native plains, and on whose uppermost shoots they are enabled to browse by the colossal height with which nature has so admirably endowed them, he must indeed be slow of conception who fails to discover both grace and dignity in all their movements.' The giraffe resembles much the trunk of a blasted tree. 'I have repeatedly been in doubt as to the presence of a troop of them, until I had recourse to my spyglass; and on referring the case to my savage attendants, I have known even their optics to fail, at one time mistaking these dilapidated trunks for camelopards, and again confounding real camelopards with these aged veterans of the forest.' In his first encounter with these noble animals he rode into the herd, and shot repeatedly at the one he selected, confronting her, bringing her to a stand, and firing within a few yards' distance. Still she did not fall; and dismounting from his horse, 'while her soft dark eye, with its silky fringe, looked down imploringly at me,' he completed the murder with a bullet through her neck. The buffalo is an antagonist of another kidney. On one occasion, when hard hunted, 'he had recourse to a singular stratagem. Doubling round some thick bushes which obscured him from our view, he found himself beside a small pool of rain-water, just deep enough to cover his body; into this he walked, and, facing about, lay gently down, and awaited our oncoming, with nothing but his old gray face and massive horns above the water, and these concealed from view by rank overhanging herbage. Our attention was entirely engrossed with the spoor, and thus we rode boldly on until within a few feet of him, when, springing to his feet, he made a desperate charge after Ruyter, uttering a low stifled roar peculiar to buffaloes (somewhat similar to the growl of a lion), and hurled horse and rider to the earth with fearful violence.'

Elephant-hunting, it would appear from our adventurer's report, is by no means the dangerous service it is commonly supposed to be. 'The elephant entertains an extraordinary horror of man, and a child can put a hundred of them to flight by passing at a quarter of a mile to windward; and when thus disturbed, they go a long way before they halt. It is surprising how soon these sagacious animals are aware of the presence of a hunter in their domains. When one troop has been attacked, all the other elephants frequenting the district are aware of the fact within two or three days, when they all forsake it, and migrate to distant parts, leaving the hunter no alternative but to inspan his wagons, and remove to fresh ground.' When urged to departure, however, by the hunter, the animal is dangerous. Mr Cumming having wounded a female elephant, dismounted from his horse to try the effect of another shot at forty yards. His horse, however, had less presence of mind than his master. 'Colesberg was extremely afraid of the elephants, and gave me much trouble, jerking my arm when I tried to fire. At length I let fly; but on endeavouring to regain my saddle, Colesberg declined to allow me to mount; and when I tried to lead him, and run for it, he only backed towards the wounded elephant. At this moment I heard another elephant close behind, and on looking about, I beheld the "friend," with uplifted trunk, charging down upon me at top speed, shrilly trumpeting, and following an old black pointer named Schwartz, that was perfectly deaf, and trotted along before the enraged elephant, quite unaware of what was behind him. I felt certain that she would have either me or my horse. I, however, determined not to relinquish my steed, but to hold on by the bridle. My men, who of course kept at a safe distance, stood aghast with their mouths open, and for a few seconds my position was certainly not an enviable one. Fortunately, however, the dogs took off the attention of the elephants, and just as they were upon me, I managed to spring into the saddle, where I was safe. As I turned my back to mount, the elephants were so very near, that I really expected to feel one of their

trunks lay hold of me. I rode up to Kleinboy for my double-barrelled two-grooved rifle; he and Isaac were pale, and almost speechless with fright. Returning to the charge, I was soon once more alongside, and firing from the saddle, I sent another brace of bullets into the wounded elephant.' On horseback Mr Cumming never felt himself in the slightest danger. The elephant charged his enemy, but after a short run, saw that pursuit was hopeless, and as soon as he stopped, the hunter fired again. There is, in fact, much sameness in the accounts our author gives us of this kind of sport, and one is inclined to think that, after the first excitement is over, an elephant-hunt must be a slow affair.

The fat of the elephant is a great luxury to the Caffres. It 'lies in extensive layers and sheets in his inside, and the quantity which is obtained from a full-grown bull in high condition is very great. Before it can be obtained, the greater part of the bowels must be removed. To accomplish this, several men eventually enter the immense cavity of his inside, where they continue mining away with their assagais, and handing the fat to their comrades outside until all is bare.' But before this mining process 'the rough outer skin is first removed in large sheets from the side which lies uppermost. Several coats of an under skin are then met with. This skin is of a tough and pliant nature, and is used by the natives for making water-bags, in which they convey supplies of water from the nearest vley or fountain (which is often ten miles distant) to the elephant. They remove this inner skin with caution, taking care not to cut it with the assagai, and it is formed into water-bags by gathering the corners and edges, and transfixing the whole on a pointed wand. The flesh is then removed in enormous sheets from the ribs, when the hatchets come into play, with which they chop through and remove individually each colossal rib.' The flesh is cut into ribbons, and hung up in the sun for two or three days to dry into 'biltongue.'

The lion-fights are numerous, and one or two of them exciting. The hunter had followed a lioness until she at length turned to bay, and advanced upon her enemy. 'Now, then, for it, neck or nothing! She is within sixty yards of us, and she keeps advancing. We turned the horses' tails to her. I knelt on one side, and taking a steady aim at her breast, let fly. The ball cracked loudly on her tawny hide, and crippled her in the shoulder, upon which she charged with an appalling roar, and in the twinkling of an eye she was in the midst of us. At this moment Stofolus's rifle exploded in his hand, and Kleinboy, whom I had ordered to stand ready by me, danced about like a duck in a gale of wind. The lioness sprang upon Colesberg, and fearfully lacerated his ribs and haunches with her horrid teeth and claws. . . . When the lioness sprang on Colesberg, I stood out from the horses, ready with my second barrel for the first chance she should give me of a clear shot. This she quickly did; for, seemingly satisfied with the revenge she had now taken, she quitted Colesberg, and slewing her tail to one side, trotted sulkily past within a few paces of me, taking one step to the left. I pitched my rifle to my shoulder, and in another second the lioness was stretched on the plain a lifeless corpse.' This is a fair example of the lion stories; but on one occasion, when the adventurer was passing the night by the side of a fire made in the wood, one of his Hottentots, whose resting-place was at some little distance, was carried off and partly devoured by a lion. This is the only casualty of the kind mentioned in the book; and with so many encounters, the circumstance is not the least remarkable thing in it.

Upon the whole, there is not so much variety in these anecdotes of woodland warfare as might have been expected; but the book will doubtless enjoy a considerable currency among the Nimrods at home. Mr Cumming returned to this country with a large quantity of ivory, and many specimens of natural history, now exhibiting in London. Two or three months ago he visited Edinburgh, and thinking proper to parade our

streets in the costume he had worn in the desert, he was of course an object of considerable interest to the idle class of the inhabitants—and to the police.

ALIMENTARY REGIMEN.

A PAPER under the above title has recently been read before the French Academy of Sciences by M. de Gasparin, who presents it as the result of long and serious inquiry into the condition of the working population. The subject is one that cannot fail to be interesting wherever large masses of population have to be fed, and nowhere more so than in England. The author discusses the question of changing circumstances, and shows that people do not always live better as their money-condition improves: he instances the inhabitants of central France as a case in point; and there are districts in this country where the same would apply. He insists on the necessity for azotised food, and institutes comparisons of various dietaries. Throughout France the average proportion of azote in food may be taken as from 20 to 26 grammes—about $\frac{1}{3}$ of an ounce. He then continues:—'A remarkable fact which I met with on our Belgian frontier, presents to us another mode of economy exercised upon regimen, even where the supply of alimentary substances is very small. The mining population of the environs of Charleroi have resolved this problem: to nourish themselves completely, preserve health, and great vigour of muscular strength, upon a diet with less than half of the nutritive principle of that indicated by observation in the rest of Europe.' The distinctive fact appears to be the habitual use of coffee at every meal. 'On rising in the morning, the workman makes what he calls his coffee: it is a very weak infusion of coffee and chicory mixed in about equal proportions. This drink, to which a tenth of milk is added, constitutes almost entirely the liquid part of the alimentation. Before going to work, the miner takes a good demi-litre (rather more than half pint) of this coffee, and eats a large slice of white bread with butter. He carries with him to the mine similar buttered slices, and a tin bottle, which holds at most a litre of coffee: this food is consumed by him during the day. In the evening, on going home, he eats potatoes dressed with cabbage or some other green vegetable, and finishes this repast with another slice of bread and butter and a cup of his coffee.'

'All the workmen examined during the inquiry state that they eat a loaf in two days. These loaves weigh about 4 lbs., which gives 2 lbs. per day. They eat meat only on Sundays and festival days, and on those days drink 2 litres of beer. Their bread is always white, and of good quality; but it is only a few privileged workmen who eat meat on other days of the week: the exception is very rare. The quantity of butter consumed may be reckoned at 2 ounces per day, and that of coffee and chicory at 1 ounce each also daily. The portion of potatoes and other vegetables cooked together and eaten in the evening is at most $1\frac{1}{2}$ lbs. During the week the workman drinks neither beer nor any other fermented liquor: coffee is his only beverage.'

After tabulating these quantities, M. de Gasparin continues:—'It is thus to 15 grammes (about half an ounce) of azote instead of 23 that the albuminous substance which enters into the ration of the Belgian miners is reduced. This nourishment is still inferior to that of the most austere religious orders imposed by mortification. I have studied and analysed the diet of the monks of La Trappe at Aiguebelle. Their pale

complexion, slow walk, the unimportant mechanical labour to which they are subjected, and which the labourers of the country estimate at not a fifth of theirs, all show that their alimentation is at a minimum in the circumstances in which they are placed. Yet it contains 15 grammes of azote, and 402 grammes of carbon, or of hydrogen reduced to six equivalents of carbon.'

'The nutriment of these miners is inferior also to that of the prisoners in our central houses of detention, whose mechanical labour is almost nil, resolving itself into easy movements of the arms, which require more of attention and skill than of strength. Their daily diet contains more than 16 grammes of azote and 475 of carbon.'

'Now it must be added that the miner, whose diet is apparently as poor as we have described it, is a most energetic workman; that when French miners—those of Anzin for example, who nourish themselves much more abundantly—attempt to work in the Charleroi mines, they are soon compelled to withdraw, not being able to keep pace with the Belgian workman in the execution of his task.'

'It is to the coffee alone that we can attribute this possibility of contenting themselves with a diet which children would find insufficient; and it is not a question here of nutritious substance, for the analysis demonstrates that the coffee constitutes no more than 1-35th of the nutritious properties of the aliment. It has thus other properties of which careful account must be taken.'

'Does it complete the digestive function?—does it provoke a more complete assimilation of the aliments?—or perhaps it retards the mutation of those organs which do not then require so great a consumption of material for their maintenance or support? On this hypothesis coffee would not nourish, but it would prevent *denourishment*.'

M. de Gasparin then shows from certain tables that the waste in liquid excretion is less when coffee is drunk than at other times, a fact which to some extent supports his hypothesis. He instances the effects of coffee in enabling soldiers and others to endure fatigue, and continues:—'An old foreman who knows the district well, and has been himself a labourer, informed me that a miner, with his wife and six children, lives on his daily earnings of two francs without making debts.'

'These researches may have important consequences in the condition of a population, and should engage the serious attention of chemists, physicians, and economists. If it were proved that, without injury to health, or to the development and maintenance of strength, the use of coffee admits of a man contenting himself with a diminished nutriment, we should be able to provide with less trouble against the deficit in times of scarcity, and to comprehend the importance of extending the use of this beverage without checking it by high duties.'

Such is the substance of M. de Gasparin's paper, which, though highly interesting, is not perhaps a complete resolution of the question. According to some of our chemists cabbage is eminently nutritive; and it is also true that dogs, fed on none but highly-azotised food, will die at the end of a month with all the symptoms of inanition. As M. Magendie observed when the subject came before the Académie, in feeding carnivora, it is necessary to give them as much of dried meat as they would require in its raw state: in the one case they get nine or ten times as much azote as in the other, with only the same nutritive result. As this learned *savant* stated, 'everything which relates to the theory of nutrition is yet surrounded by an impenetrable veil. We know nothing or next to nothing upon this important and fundamental phenomenon. We are beginning to comprehend the different operations of digestion, but all that happens after the formation and absorption of the chyle, all that takes place in the

blood, and in the intimate connections of the fluids with the organic tissues, is still enveloped in the completest obscurity.'

Stories for Young People.

THE KITE.

THE setting sun beamed in golden light over the country; long shadows lay on the cool grass: the birds, which had been silent through the sultry heat of the day, sang their joyous evening hymn: the merry voices of the village children sounded through the clear air, while their fathers loitered about enjoying the luxury of rest after labour. A sun-burnt traveller with dusty shoes walked sturdily along the high road: he was young and strong, and his ruddy cheeks glowed in the warm light: he carried his baggage on a stick over his shoulder, and looked straight on towards the cottages of the village; and you might see by the expression of his face that his eye was earnestly watching for the first glimpse of the home that lay among them, to which he was returning.

The same setting sun threw his golden beams over the great metropolis: they lighted up streets, and squares, and parks whence crowds were retiring from business or pleasure to their various places of abode or gay parties: they pierced even through the smoke of the city, and gilded its great central dome; but when they reached the labyrinth of lanes and courts which it encloses, their radiance was gone, for noxious vapours rose there after the heat of the day, and quenched them. The summer sun is dreaded in those places.

The dusky light found its way with difficulty through a small and dim window into an upper room of a house in one of these lanes, and any one entering it would at first have thought it was void of any living inhabitant, had not the restless tossing and oppressed breathing that proceeded from a bed in one corner borne witness to the contrary. A weak, sickly boy lay there, his eye fixed on the door. It opened, and he started up in bed; but at the sight of another boy, a few years older than himself, who came in alone, he sunk back again, crying in a plaintive voice, 'Don't you see her coming yet?'

'No, she is not in sight: I ran to the corner of the lane, and could see nothing of her,' replied the elder boy, who, as he spoke, knelt down before the grate, and began to arrange some sticks in it.

Everything in the room bespoke poverty; yet there was an appearance of order, and as much cleanliness as can be attained in such an abode. Among the scanty articles of furniture there was one object that was remarkable as being singularly out of place, and apparently very useless there: it was a large paper kite, that hung from a nail on the wall, and nearly reached from the low ceiling to the floor.

'There's eight o'clock just struck, John,' said the little boy in bed. 'Go and look once more if mother's not coming yet.'

'It's no use looking, Jem. It wont make her come any faster; but I'll go to please you.'

'I hear some one on the stairs.'

'It's only Mrs Willis going into the back-room.'

'Oh dear, dear, what shall I do?'

'Don't cry, Jem. Look, now I've put the wood all ready to boil the kettle the minute mother comes, and she'll bring you some tea: she said she would. Now I'm going to sweep up the dust, and make it all tidy.'

Jem was quieted for a few minutes by looking at his brother's busy operations, carried on in a bustling, rattling way, to afford all the amusement possible; but the feverish restlessness soon returned.

'Take me up, do take me up,' he cried; 'and hold me near the broken pane, please, John;' and he stretched out his white, wasted hands.

John kindly lifted out the poor little fellow, and dragging a chair to the window, sat down with him on his knee, and held his face close to the broken pane, through which, however, no air seemed to come, and he soon began to cry again.

'What is it, Jem?—what's the matter?' said a kind voice at the door, where a woman stood, holding by the hand a pale child.

'I want mother,' sobbed Jem.

'Mother's out at work, Mrs Willis,' said John; 'and she thought she should be home at half-past seven; but she's kept later sometimes.'

'Don't cry,' said Mrs Willis's little girl, coming forward. 'Here's my orange for you.'

Jem took it, and put it to his mouth; but he stopped, and asked John to cut it in two; gave back half to the little girl, made John taste the portion he kept, and then began to suck the cooling fruit with great pleasure, only pausing to say with a smile, 'Thank you, Mary.'

'Now lie down again, and try to go to sleep; there's a good boy,' said Mrs Willis; 'and mother will soon be here. I must go now.'

Jem was laid in bed once more; but he tossed about restlessly, and the sad wail began again.

'I'll tell you what,' said John, 'if you will stop crying, I'll take down poor Harry's kite, and show you how he used to fly it.'

'But mother don't like us to touch it.'

'No; but she will not mind when I tell her why I did it this once. Look at the pretty blue and red figures on it. Harry made it, and painted it all himself; and look at the long tail!'

'But how did he fly it? Can't you show me how poor Harry used to fly it?'

John mounted on a chest, and holding the kite at arm's length, began to wave it about, and to make the tail shake, while Jem sat up admiring.

'This was the way he used to hold it up. Then he took the string that was fastened here—mother has got it in the chest—and he held the string in his hand, and when the wind came, and sent the kite up, he let the string run through his hand, and up it went over the trees, up—up—and he ran along in the fields, and it flew along under the blue sky.'

John waved the kite more energetically as he described, and both the boys were so engrossed by it, that they did not observe that the mother, so longed for, had come in, and had sunk down on a chair near the door, her face bent and nearly hidden by the rusty crape on her widow's bonnet, while the tears fell fast on her faded black gown.

'Oh mother, mother!' cried Jem, who saw her first, 'come and take me—come and comfort me!'

The poor woman rose quickly, wiped her eyes, and hastened to her sick child, who was soon nestled in her arms, and seemed to have there forgotten all his woes.

The kind, good-natured John had meanwhile hung up the kite in its place, and was looking rather anxiously at his mother, for he well understood the cause of the grief that had overcome her at the sight of his occupation when she first came in; but she stroked his hair, looked kindly at him, and bid him make the kettle boil, and get the things out of her basket. All that was wanted for their simple supper was in it, and it was not long before little Jem was again laid down after the refreshment of tea; then a mattress was put in a corner for John, who was soon asleep; and the mother, tired with her day's hard work, took her place in the bed by the side of her child.

But the tears that had rolled fast down her cheeks as her lips moved in prayer before sleep came upon her, still made their way beneath the closed eyelids, and Jem awoke her by saying, as he stroked her face with his hot hand, 'Don't cry, mother; we wont touch it again!'

'It's not that, my child; no, no: it's the thought of my own Harry. I think I see his pleasant face, and his curly hair, and his merry eyes looking up after his kite.' It was not often she spoke out her griefs; but now, in the silent night, it seemed to comfort her.

'Tell me about him, mother, and about his going away! I like to hear you tell about him.'

'He worked with father, you know, and a clever workman he learned to be.'

'But he was much older than me. Shall I ever be a good workman, mother?'

The question made her heart ache with a fresh anguish, and she could not answer it; but replied to his first words, 'Yes, he was much older. We laid three of our children in the grave between him and John. Harry was seventeen when his uncle took him to serve out his time in a merchant-ship. Uncle Ben, that was ship's carpenter, it was that took him. The voyage was to last a year and a-half, for they were to go to all manner of countries far, far away. One letter I had. It came on a sad day: the day after poor father died, Jem. And then I had to leave our cottage in our own village, and bring you two to London, to find work to keep you; but I have always taken care to leave word where I was to be found, and have often gone to ask after letters. Not one has ever come again; and it's six months past the time when they looked for the ship, and they don't know what to think. But I know what I think: the sea has rolled over my dear boy, and I shall never see him again—never, never in this weary world.'

'Don't cry so, mother dear: I'll try to go to sleep, and not make you talk.'

'Yes—try; and if you can only get better, that will comfort me most.'

Both closed their eyes, and sleep came upon them once more.

It was eight o'clock in the morning when the little boy awoke, and then he was alone; but to that he was accustomed. His mother was again gone to work, and John was out cleaning knives and shoes in the neighbourhood. The table, with a small piece of bread and a cup of blue milk and water on it, stood beside him. He drank a little, but could not eat, and then lay down again with his eyes fixed on Harry's kite.

'Could he fly it, or rather 'could he see John fly it—really out of doors and in the air!' That was of all things what he most longed to do. He wondered where the fields were, and if he could ever go there and see the kite fly under the blue sky. Then he wondered if John could fly it in the lane. He crept out of bed, and tottered to the window.

The lane was very wet and slushy, and a nasty black gutter ran down it, and oozed out among the broken stones. There had been a heavy thunder-shower in the night; and as there was no foot pavement, and what stones there were were very uneven and scattered, the black pools lodged among them, and altogether it seemed impossible for a boy to fly a kite there; for 'how could he run along holding the string!—he would tumble among the dirty pools. There were only four children to be seen in it now, out of all the numbers that lived in the houses, though it was a warm summer morning, and they were dabbling with naked feet in the mud, and their ragged clothes were all draggled. Mother would never let him and John do like that.'

Still he stood, first examining the window, then looking at the kite; then putting his hand out through the broken pane, and pondered over a scheme that had entered his mind.

'John,' he cried, as the door opened, 'don't you think we could fly Harry's kite out of the broken pane?'

At first this idea seemed to John perfectly chimerical; but after some consultation and explanation a plan was devised between the two boys, to complete which they only waited for their mother's return. They expected her at one, for this was only half a day's work.

Jem was dressed when she returned, and his excitement made him appear better; but she saw with grief that he could not touch his dinner; and her anxiety about him made her less unwilling, than she otherwise would have done, consent to the petition he made, that 'only for this once she would let him and John fly the kite outside the window.' She stifled her sigh as she sat down to needle-work, lest she should cast a gloom over the busy preparations that immediately commenced.

The difficulty had been how to get the kite out, because

the window would not open. To surmount this, John was to go down to the lane, taking the kite with him, while Jem lowered the string out of the broken pane.

'When you get hold of the string, you know, John, you can fasten it, and then stand on that large stone opposite, just by where that gentleman is, and hold up the kite, and then I will pull.'

All was done accordingly. John did his part well. Jem pulled; the kite rose to the window, and fluttered about, for the thunder had been followed by a high wind, which was felt a little even in this close place, and the boys gazed at it with great pleasure. As it dangled loosely by the window in this manner, the tail became entangled, and John was obliged to run up to help to put it right.

'Let it down to me again when I have run out,' said he, as he tried to disentangle it; 'and I will stand on the stone, and hold it up, and you can pull again. There's the gentleman still, and now there's a young man besides. The gentleman has made him look up at the kite.'

'Come and look, mother,' said Jem: but she did not hear. 'The young man has such a brown face, and such curly hair.'

'And he's like— Mother, he is crossing over!' cried John. 'He has come into the house!'

The mother heard now. A wild hope rushed through her heart; she started up; a quick step was heard on the stairs; the door flew open; and the next moment she was clasped in her son's arms!

The joy nearly took away her senses. Broken words mingled with tears, thanksgivings, and blessings, were all that were uttered for some time between them. Harry had Jem on his knee, and John pressed close to his side, and was holding his mother tight by the hand, and looking up in her face, when at last they began to believe and understand that they once more saw each other. And then he had to explain how the ship had been disabled by a storm in the South Seas; and how they got her into one of the beautiful islands there, and resettled her, and after six months' delay, brought her back safe and sound, cargo and all; and how he and Uncle Ben were both strong and hearty.

'How well you look, my dear boy!' said the happy mother. 'How tall, and stout, and handsome you are!'

'And he's got his curly hair and bright eyes still,' said poor wretched Jem, speaking for the first time.

'But you, mother, and all of you, how pale you are, and how thin! I know—yes, don't say it—I know who's gone. I went home last night, mother. I walked all the way to the village, and found the poor cottage empty, and heard how he died.'

'Home! You went there?'

'Yes, and the neighbours told me you were gone to London. But I slept all night in the kitchen on some straw. There I lay, and thought of you, and of him we had lost, and prayed that I might be a comfort to you yet.'

Joy and sorrow seemed struggling for the mastery in the widow's heart; but the present happiness proved the stronger, and she was soon smiling, and listening to Harry.

'I had a hard matter to find you,' he said. 'You had left the lodging they directed me to at first.'

'But I left word where I had come to.'

'Ay, so you had; and an old woman there told me you were at No. 10, Paradise Row.'

'What could she be thinking of!'

'No one had heard of you in that place. However, as I was going along back again to get better information, keeping a sharp look-out in hopes I might meet you, I passed the end of this lane, and saw it was called Eden Lane, so I thought perhaps the old lady had fancied Paradise and Eden were all the same; and sure enough they are both as like one as the other, for they are wretched, miserable places as ever I saw. I turned in here, and then No. 10 proved wrong too; and as I was standing looking about, and wondering what I had better do next, a gentleman touched my arm, and pointing first

at the black pools in the broken pavement, and then up at this window, he said—I remember his very words, they struck me so—"Do not the very stones rise up in judgment against us! Look at those poor little fellows trying to fly their kite out of a broken pane!" Hearing him say so, I looked up, and saw my old kite—by it I found you at last."

They all turned gratefully towards it, and saw that it still swung outside, held there safely by its entangled tail. The talk, therefore, went on uninterruptedly. Many questions were asked and answered, and many subjects discussed; the sad state of poor little Jem being the most pressing. At the end of an hour a great bustle was going on in the room: they were packing up all their small stock of goods, for Harry had succeeded, after some argument, in persuading his mother to leave her unhealthy lodging that very evening, and not to risk even one more night for poor Jem in that poisonous air. He smoothed every difficulty. Mrs Willis gladly undertook to do the work she had engaged to do, and with her he deposited money for the rent, and the key of the room. He declared he had another place ready to take his mother to; and to her anxious look he replied, 'I did good service in the ship, and the owners have been generous to us all. I've got forty pounds.'

'Forty pounds!' If he had said, 'I have got possession of a gold district in California,' he would not have created a greater sensation. It seemed an inexhaustible amount of wealth.

A light cart was soon hired and packed, and easily held not only the goods (not forgetting the kite), but the living possessors of them; and they set forth on their way.

The evening sun again beamed over the country; and the tall trees, as they threw their shadow across the grass, waved a blessing on the family that passed beneath, from whose hearts a silent thanksgiving went up that harmonised with the joyous hymn of the birds. The sun-burnt traveller, as he walked at the horse's head, holding his elder brother's hand, no longer looked anxiously onward, for he knew where he was going, and saw by him his younger brother already beginning to revive in the fresh air, and rejoiced in his mother's expression of content and happiness. She had divined for some time to what home she was going.

'But how did you contrive to get it fixed so quickly, my kind, good boy?' she said.

'I went to the landlord, and he agreed at once: and do not be afraid, I can earn plenty for us all.'

'But must you go to sea again?'

'If I must, do not fear. Did you not always teach me that His hand would keep me, and hold me, even in the uttermost parts of the sea?'

And she felt that there was no room for fear.

A week after this time, the evening sun again lighted up a happy party. Harry and John were busied in preparing the kite for flying in a green field behind their cottage. Under the hedge, on an old tree trunk, sat their mother, no longer in faded black and rusty crape, but neatly dressed in a fresh, clean gown and cap, and with a face bright with hope and pleasure. By her was Jem, with cheeks already filling out, a tinge of colour in them, and eyes full of delight. On her other side was little Mary Willis. She had just arrived, and was telling them how, the very day after they left, some workmen came and put down a nice pavement on each side of the lane, and laid a pipe underground instead of the gutter; and that now it was as dry and clean as could be; and all the children could play there, and there were such numbers of games going on; and they all said it was the best thing they had had done for them for many a day; and so did their mothers too, for now the children were not all crowded into their rooms all day long, but could play out of doors.

'Depend upon it,' said Harry, 'it is that gentleman's doing that spoke to me of it the day I came first. This good old kite has done good service, and now it shall be rewarded by sailing up to a splendid height.'

As he spoke, he held it up, the light breeze caught it,

and it soared away over their heads under the blue sky; while the happy faces that watched it bore witness to the truth of his words—that 'the good old kite had done good service.'

ANECDOTE OF A SINGER.

SIGNORA GRASSINI, the great Italian singer, died a few months since at Milan. She was distinguished not only for her musical talents, but also for her beauty and powers of theatrical expression. One evening in 1810, she and Signor Crescentini performed together at the Tuileries, and sang in 'Romeo and Juliet.' At the admirable scene in the third act, the Emperor Napoleon applauded vociferously, and Talma, the great tragedian, who was among the audience, wept with emotion. After the performance was ended, the Emperor conferred the decoration of a high order on Crescentini, and sent Grassini a scrap of paper, on which was written, 'Good for 20,000 livres.—NAPOLEON.'

'Twenty thousand francs!' said one of her friends—the sum is a large one.

'It will serve as a dowry for one of my little nieces,' replied Grassini quietly.

Indeed few persons were ever more generous, tender, and considerate towards their family than this great singer.

Many years afterwards, when the Empire had crumbled into dust, carrying with it in its fall, among other things, the rich pension of Signora Grassini, she happened to be at Bologna. There another of her nieces was for the first time presented to her, with a request that she would do something for her young relative. The little girl was extremely pretty, but not, her friends thought, fitted for the stage, as her voice was a feeble contralto. Her aunt asked her to sing; and when the timid voice had sounded a few notes, 'Dear child,' said Grassini, embracing her, 'you will not want me to assist you. Those who called your voice a contralto were ignorant of music. You have one of the finest sopranos in the world, and will far excel me as a singer. Take courage, and work hard, my love: your throat will win a shower of gold.' The young girl did not disappoint her aunt's prediction. She still lives, and her name is Giulia Grisi.

A LIVING SUSPENSION BRIDGE.

'They are coming towards the bridge; they will most likely cross by the rocks yonder,' observed Raoul. 'How!—swim it?' I asked. 'It is a torrent there.' 'Oh, no,' answered the Frenchman; 'monkeys would rather go into fire than water. If they cannot leap the stream, they will bridge it.' 'Bridge it! and how?' 'Stop a moment, captain, you shall see.' The half-human voices now sounded nearer, and we could perceive that the animals were approaching the spot where we lay. Presently they appeared upon the opposite bank, headed by an old gray chieftain, and officered like so many soldiers. They were, as Raoul had stated, of the *comadrejas*, or ring-tailed tribe. One—an aide-de-camp, or chief pioneer, perhaps—ran out upon a projecting rock, and after looking across the stream, as if calculating the distance, scampered back, and appeared to communicate with the leader. This produced a movement in the troop. Commands were issued, and fatigue-parties were detached, and marched to the front. Meanwhile several of the *comadrejas*—engineers no doubt—ran along the bank, examining the trees on both sides of the *arroyo*. At length they all collected round a tall cottonwood that grew over the narrowest part of the stream, and twenty or thirty of them scampered up its trunk. On reaching a high point, the foremost—a strong fellow—ran out upon a limb, and taking several turns of his tail around it, slipped off, and hung head downwards. The next on the limb, also a stout one, climbed down the body of the first, and whipping his tail tightly round the neck and fore-arm of the latter, dropped off in his turn, and hung head down. The third repeated this manoeuvre upon the second, and the fourth upon the third, and so on, until the last upon the string rested his fore-paws upon the ground. The living chain now commenced swinging backwards and

forwards, like the pendulum of a clock. The motion was slight at first, but gradually increased, the lowermost monkey striking his hands violently on the earth as he passed the tangent of the oscillating curve. Several others upon the limbs above aided the movement. This continued until the monkey at the end of the chain was thrown among the branches of a tree on the opposite bank. Here, after two or three vibrations, he clutched a limb, and held fast. This movement was executed adroitly, just at the culminating point of the oscillation, in order to save the intermediate links from the violence of a too sudden jerk! The chain was now fast at both ends, forming a complete suspension bridge, over which the whole troop, to the number of four or five hundred, passed with the rapidity of thought. It was one of the most comical sights I ever beheld to witness the quizzical expression of countenances along that living chain! The troop was now on the other side, but how were the animals forming the bridge to get themselves over? This was the question which suggested itself. Manifestly by number one letting go his tail. But then the point *d'appui* on the other side was much lower down, and number one, with half-a-dozen of his neighbours, would be dashed against the opposite bank, or soured into the water. Here, then, was a problem, and we waited with some curiosity for its solution. It was soon solved. A monkey was now seen attaching his tail to the lowest on the bridge, another girdled him in a similar manner, and another, and so on, until a dozen more were added to the string. These last were all powerful fellows; and running up to a high limb, they lifted the bridge into a position almost horizontal. Then a scream from the last monkey of the new formation warned the tail end that all was ready; and the next moment the whole chain was swung over, and landed safely on the opposite bank. The lowermost links now dropped off like a melting candle, whilst the higher ones leaped to the branches, and came down by the trunk. The whole troop then scampered off into the chapparel, and disappeared!—*Captain Reid's Adventures in Southern Mexico.*

LONG-SUSPENDED VITALITY.

Mr Baird of the British Museum contributes the following extraordinary instance of long-suspended vitality to the July number of the 'Annals of Natural History.'—In March 1846 a series of shells was presented to the museum by Charles Lamb, Esq., collected by him previously in Egypt, Greece, &c. Amongst these were two specimens from Egypt of the *Helix maculosa*, "the snail of the desert," as it is generally called, and which is found in great abundance living on the dry and arid deserts of Egypt and Syria. On the 25th of March 1846 the two specimens were fixed upon tablets, and placed in the collection amongst the other molluscs. There they remained, summer and winter, fast fixed and gummed down upon the tablet, and immured in their prison till March 1850, four entire years after they had been first placed there, and without the slightest suspicion having been awakened that one of them contained a living inhabitant. How long they had been in the possession of Mr Lamb before he presented them to the museum I do not know. About the 15th of March 1850, having occasion to examine some shells in the same case as that in which these two helices were contained, I observed that in one of them a thin glassy-looking covering, the *epiphraim*, had spread over its mouth, and with evident signs that it was but recently formed. Rather surprised at this appearance, I removed the two specimens from the tablet, and placed them in tepid water. After the lapse of ten minutes, I had the pleasure of seeing the animal of one of the specimens begin to gradually come forth, and in a few minutes more walk along the surface of the basin in which it was placed. I immediately upon that removed it from the water, and placed it in a tumbler, where it began to crawl up its side. Next day I supplied it with a small portion of cabbage-leaf, of which it partook readily, though in small quantity. The animal in the other shell was found to be dead. It is not the least curious part of the story that the shell of the living animal was an injured shell, and had been repaired by the animal before it was collected by Mr Lamb, though it evidently had not time to perfect the mouth. It is still alive, and feeds readily, preferring cabbage-leaf to lettuce or any other kind of food I have yet tried. It is now (24th June 1850) engaged in the process of completing the mouth of its shell, having since March made a small addition to its growth.

EVENING GUESTS.

Is in the silence of this lonely eve,
With the street-lamp pale-flickering on the wall,
A spirit were to say to me—'Believe,
Thou shalt be answered. Call!'—Whom should I call?

And then I were to see thee gliding in
With thy pale robes (that in long-empty fold
Lie in my keeping)—and my fingers, thin
As thine were once—to feel in thy safe hold;

I should fall weeping on thy neck, and say
'I have so suffered since—since'— But the tears
Would cease, remembering how they count thy day,
A day that is with God a thousand years.

Then, what are these sad weeks, months, years of mine
To thine all-measureless infinitude?
What my whole life, when myriad lives divine
May rise, each leading to a higher good?

I lose myself—I faint. Beloved—best!
Sit in thy olden, dear humanity
A little while, my head upon thy breast,
And then I will go back to Heaven with thee.

Should I call Thee?—Ah no, I would not call!
But if, by some invisible angel led,
Thy foot were at the door, thy face, voice—all
Entering—Oh joy! Oh life upon the dead!

Then I, pale-smiling with a deep content,
Would give to thee the welcome long unknown;
And 'stead of those kind accents daily sent
To cheer me, I should hear thine own—thine own!

Thou too, like the beloved guest late gone,
Wouldst sit and clasp my feeble hand in thine;
'T would grieve thee to know why it grew so wan,
Therefore I would smile on, and give no sign.

And thou, soft-speaking in the olden voice,
Perchance with a compassionate tremble stirred,
Wouldst change this anguish'd doubt to full rejoice,
And heal my soul with each balm-dropping word.

So—talking of things meet for such as we—
Affection, strong as life, solemn as death,
Serenity as that divine eternity
Where I shall meet thee, who wert my soul's breath—

Upon this crown'd eve of many eves
Thou know'st—'a third of life and all its lore
Would climax like a breaking wave. Who grieves
Though it should break, and cease for evermore?

HABITS.

Habit uniformly and constantly strengthens all our active exertions; whatever we do often, we become more and more apt to do. A snuff-taker begins with a pinch of snuff per day, and ends with a pound or two every month. Swearing begins in anger; it ends by mingling itself with ordinary conversation. Such-like instances are of too common notoriety to need that they be adduced; but, as I before observed, at the very time that the tendency to do the thing is every day increasing, the pleasure resulting from it is, by the blunted sensibility of the bodily organ, diminished; and the desire is irresistible, though the gratification is nothing. There is rather an entertaining example of this in Fielding's 'Life of Jonathan Wild,' in that scene where he is represented as playing at cards with the Count, a professed gambler. 'Such,' says Mr Fielding, 'was the power of habit over the minds of these illustrious persons, that Mr Wild could not keep his hands out of the Count's pockets, though he knew they were empty; nor could the Count abstain from palming a card, though he well knew that Mr Wild had no money to pay him.'—*Sydney Smith's Moral Philosophy.*

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